

What Is Claimed Is:

1 1. A method that facilitates dynamic delivery of service profiles to a
2 client, comprising:
3 performing a discovery operation to allow the client to discover new
4 services on a network;
5 if a new service is discovered for which the client does not possess a
6 service profile, causing the client to obtain the service profile from the new
7 service; and
8 causing the service profile to be installed on the client to enable the client
9 to use the new service.

1 2. The method of claim 1, wherein causing the client to obtain the
2 service profile involves:
3 causing the client to send a request for the service profile to the new
4 service; and
5 causing the client to receive the service profile from the new service.

1 3. The method of claim 1, wherein the service profile includes code,
2 and wherein causing the service profile to be installed on the client involves
3 causing the code to be installed on the client.

1 4. The method of claim 1,
2 wherein the service profile includes a specification that describes how to
3 use the new service; and
4 wherein causing the service profile to be installed on the client involves,

5 causing code to be generated to implement the
6 specification, and
7 causing the code to be installed on the client.

1 5. The method of claim 1, wherein the service profile is encoded in a
2 universal form that can be executed by different types of clients.

1 6. The method of claim 1,
2 wherein there exist different service profile implementations for different
3 types of clients; and
4 wherein causing the client to obtain the service profile involves,
5 communicating characteristics of the client to the new
6 service,
7 allowing the new service to select a service profile
8 implementation for the client based on the characteristics of the
9 client, and
10 allowing the new service to send the selected service profile
11 implementation to the client.

1 7. The method of claim 1, wherein causing the client to obtain the
2 service profile from the new service involves executing a dynamic extension
3 profile, which implements a standard protocol that enables the client to acquire
4 any profile the client needs at the time the profile is needed.

1 8. The method of claim 1,
2 wherein performing the discovery operation involves using the Bluetooth
3 Service Discovery Protocol (SDP); and

4 wherein the client and the new service communicate using the Bluetooth
5 networking standard.

1 9. The method of claim 1, wherein the service profile can define a
2 service-specific Application Programming Interface (API).

1 10. The method of claim 1, wherein the service profile implements a
2 domain-specific protocol stack associated with the new service.

1 11. A computer-readable storage medium storing instructions that
2 when executed by a computer cause the computer to perform a method that
3 facilitates dynamic delivery of service profiles to a client, the method comprising:
4 performing a discovery operation to allow the client to discover new
5 services on a network;
6 if a new service is discovered for which the client does not possess a
7 service profile, causing the client to obtain the service profile from the new
8 service; and
9 causing the service profile to be installed on the client to enable the client
10 to use the new service.

1 12. The computer-readable storage medium of claim 11, wherein
2 causing the client to obtain the service profile involves:
3 causing the client to send a request for the service profile to the new
4 service; and
5 causing the client to receive the service profile from the new service.

1 13. The computer-readable storage medium of claim 11, wherein the
2 service profile includes code, and wherein causing the service profile to be
3 installed on the client involves causing the code to be installed on the client.

1 14. The computer-readable storage medium of claim 11,
2 wherein the service profile includes a specification that describes how to
3 use the new service; and
4 wherein causing the service profile to be installed on the client involves,
5 causing code to be generated to implement the
6 specification, and
7 causing the code to be installed on the client.

1 15. The computer-readable storage medium of claim 11, wherein the
2 service profile is encoded in a universal form that can be executed by different
3 types of clients.

1 16. The computer-readable storage medium of claim 11,
2 wherein there exist different service profile implementations for different
3 types of clients; and
4 wherein causing the client to obtain the service profile involves,
5 communicating characteristics of the client to the new
6 service,
7 allowing the new service to select a service profile
8 implementation for the client based on the characteristics of the
9 client, and

10 allowing the new service to send the selected service profile
11 implementation to the client.

1 17. The computer-readable storage medium of claim 11, wherein
2 causing the client to obtain the service profile from the new service involves
3 executing a dynamic extension profile, which implements a standard protocol that
4 enables the client to acquire any profile the client needs at the time the profile is
5 needed.

1 18. The computer-readable storage medium of claim 11,
2 wherein performing the discovery operation involves using the Bluetooth
3 Service Discovery Protocol (SDP); and
4 wherein the client and the new service communicate using the Bluetooth
5 networking standard.

1 19. The computer-readable storage medium of claim 11, wherein the
2 service profile can define a service-specific Application Programming Interface
3 (API).

1 20. The computer-readable storage medium of claim 11, wherein the
2 service profile implements a domain-specific protocol stack associated with the
3 new service.

1 21. An apparatus that facilitates dynamic delivery of service profiles to
2 a client, comprising:

3 a discovery mechanism configured to perform a discovery operation that
4 allows the client to discover new services on a network;

5 a profile transfer mechanism, wherein if a new service is discovered for
6 which the client does not possess a service profile, the profile transfer mechanism

7 is configured to cause the service profile to be transferred from the new service to
8 the client; and
9 an installation mechanism configured to cause the service profile to be
10 installed on the client to enable the client to use the new service.

1 22. The apparatus of claim 21, wherein the profile transfer mechanism
2 is configured to:
3 cause the client to send a request for the service profile to the new service;
4 and to
5 cause the client to receive the service profile from the new service.

1 23. The apparatus of claim 21, wherein the service profile includes
2 code, and wherein the installation mechanism is configured to cause the code to
3 be installed on the client.

1 24. The apparatus of claim 21,
2 wherein the service profile includes a specification that describes how to
3 use the new service; and
4 wherein the installation mechanism is configured to,
5 cause code to be generated to implement the specification,
6 and to
7 cause the code to be installed on the client.

1 25. The apparatus of claim 21, wherein the service profile is encoded
2 in a universal form that can be executed by different types of clients.

1 26. The apparatus of claim 21,

2 wherein there exist different service profile implementations for different
3 types of clients; and
4 wherein the profile transfer mechanism is configured to,
5 communicate characteristics of the client to the new
6 service,
7 allow the new service to select a service profile
8 implementation for the client based on the characteristics of the
9 client, and to
10 allow the new service to send the selected service profile
11 implementation to the client.

1 27. The apparatus of claim 21, wherein the profile transfer mechanism
2 is configured to execute a dynamic extension profile, which implements a
3 standard protocol that enables the client to acquire any profile the client needs at
4 the time the profile is needed.

1 28. The apparatus of claim 21,
2 wherein the discovery mechanism uses the Bluetooth Service Discovery
3 Protocol (SDP); and
4 wherein the client and the new service communicate using the Bluetooth
5 networking standard.

1 29. The apparatus of claim 21, wherein the service profile can define a
2 service-specific Application Programming Interface (API).

1 30. The apparatus of claim 21, wherein the service profile implements
2 a domain-specific protocol stack associated with the new service.

1 31. A device configured to dynamically deliver a service profile to a
2 client to enable the client to use a service provided by the device, comprising:
3 the device configured to provide the service;
4 a memory within the device containing the service profile that enables
5 clients to use the service provided by the device; and
6 a profile transfer mechanism configured to transfer the service profile to
7 the client on demand.

1 32. The device of claim 31, further comprising a discovery mechanism
2 configured to perform a discovery operation that allows devices to discover each
3 other.